

Specifications on the Maintenance of Green Spaces at ENEEO

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1 DESCRIPTION OF WORKS

1.1 Scope of works

The works covered by these Specifications (CC) concern the establishment, cleaning and maintenance of green spaces and flower gardens, as well as VRDs, around and more or less close to ENEO premises and facilities. These works vary according to seasons and regions.

It shall include open-air lawns and flower gardens; other greenery with shrubs and trees; roads, sidewalks, drains and gutters; sports grounds; concrete platforms; gravel or clay areas, warehouse storage areas, surroundings of premises and facilities, etc.

The work consists of the tasks of creating and maintaining green spaces and flower gardens, clearing, brush clearing, maintenance of spaces and water pipes, as well as garbage removal from nearby and/or outdoor areas of buildings. Grass-cut must be less than 1cm above the ground (natural height not considered). A summary of these works is defined below:

- Preparation and planting of young plants,
- Lawn mowing / watering and removal of grass cut,
- Maintenance of lawns and flowers,
- Sweeping and removal of wastes, dead leaves and refuse,
- Washing and cleaning of drains, ducts and rain gutters,
- Destruction of insect nests and anthills,
- Cleaning and weeding of exterior concrete, gravel or earth surfaces,
- Grubbing of weeds, cleaning mosses
- Elimination of weeds with herbicide,
- Grubbing or pruning shrubs,
- Pruning of trees requiring climbing of more than 1.80m (stepladder, ladder, basket, platform, scaffolding, etc.),
- Cleaning of fences, gates and barriers around facilities,
- Brush clearing and refuse removal,
- Brush clearing and weeding over 2 m or more on either side of barriers and gates, as well as fences bordering premises,
- Weeding of grass by hand on concrete, gravel, asphalt or paved areas,
- Levelling of land surfaces after major clearing and weeding works.

1.2 Work execution framework

The main types of ENEO sites are classified below according to their current use:

- Sites used as Offices,
- Commercial Agencies and Technical Bases,
- Industrial sites (hydro and thermal power stations, hydro dams, transformation stations, warehouses, UTPB, etc.),
- Training sites (CDRH, nursery and/or primary schools),
- Accommodation sites (Rest houses, Kribi Retreat Centre, On-call Housing, Official Housing, Cities),
- Relaxation sites (Clubs, Tennis, Indoor sports),
- Restaurants.

1.3 Technical specifications - Summary of green space works

The technical specifications of the works applicable to all ENEO sites, as well as their frequency, are described in Table 1.1 of Appendix 1 of this document. This table indicates, for each type of task described by its designation, the general frequency desired for its performance. This list, however, is neither exhaustive nor exclusive. The service provider would have to make up for shortcomings with his skills and technical knowledge in the field.

However, faced with delicate situations, the service provider must propose and have technical solutions validated by the ENEO site manager or by the head office SDGP, before execution.

This table 1.1 will serve as a general framework for the preparation of periodic works execution schedules for each site, it being understood that these schedules must take into account the seasons in each region, as well as the duration of the contracts.

The nature of the service implicitly includes the material to be used when not specified. The list below indicates the types of basic tools for the maintenance of green spaces:

- bag-in-box container, barrel, bucket,
- watering can, striker, garden hose,
- air blower,
- motorized lawn mower, motorized brush cutter,
- hand saw, power saw, chainsaw,
- shears, pruning shears, knife,
- broom, brush, rake, sickle,
- machete, shovel, hoe, dibble
- axe, pickaxe, stump grinder
- wheelbarrow, machinery and motorized vehicles
- etc.

Specific products are used for the purposes of protection or improvement of the final results (rejuvenation or regeneration of lawns and flowers, protection against reptiles and/or against insects, growth retardants of wild weeds, herbicides, insecticides, descalers, descaling agents, anti-foam, etc.).

1.4 Exceptional and irregular tasks

Exceptional tasks may be defined for some sites outside the detailed framework of these specifications (cleaning of slabs, roof slabs, terraces and elevated platforms, brush clearing/cleaning of sites confined around the facilities and external equipment of the power plants and substations, cleaning of drains, pipes and underground sewages or beneath slabs, etc.).

However, they fall within the scope of its execution as long as they do not require any material, personnel or qualification not taken into account here. Their timeliness and occurrence are defined by the ENEO site and equipment managers, and the execution of the work supervised by them. The required security conditions must be scrupulously observed. Relevant clearances must be presented to execution officers when needed.

1.5 Distribution and Quantity of Green Space Cleaning Zones

Table 1.5 in appendix 1 shows the distribution by geographical zone, as well as the quantity of green spaces to be maintained by site and by Zone. From this, we have 6 major zone under the contracts below, covering all the ENEO sites across Cameroon (offices, agencies, power plants, substations, housing, training, warehouses, etc.):

- **Zone 1**: Headquarters + DRD covering all Eneo sites in the city of Douala
- **Zone 2**: DRSANO covering the Eneo geographic regions of the Ocean and Sanaga Maritime Division (including the Song-Loulou and Edéa hydro plants)
- **Zone 3**: DRSOM covering the Eneo geographic regions of South-West and Moungo
- **Zone 4**: DRY-DRC-DRSM-DRE covering the Eneo geographic regions of Yaoundé, Centre, South and Mbalmayo, and East
- **Zone 5**: DRNEA covering the Eneo geographic regions of Adamawa, North and Far North (including the Lagdo hydro plant and the Mbakaou dam).
- **Zone 6**: DRONO covering the Eneo geographic regions of the West and North-West (including the Mape and Bamenjin dams)

Each zone is divided into sub zones, themselves made up of activity sites, for a total of 18 sub zones (46 contracts), covering the current 278 sites (contracts).

2 EXECUTION OF MAINTENANCE SERVICES

2.1 Work execution schedule by site

The maintenance of green spaces depends on the seasons in the region of each site. Also, the implementation schedules take into account periods of activity only, as well as the nature/sensitivity of the sites. Some sites are only maintained during the rainy seasons (brush, remote sites and/or far from facilities), while others are maintained throughout the year (sensitive urban sites and/or large metropolitan areas).

Figure 1 in Appendix 1 shows the seasons in the various regions of Cameroon. It shows the following periods of green space activity according to the seasons and regions:

- North Adamawa: from May 1 to September 30
- Far North: from June 1st to October 31
- Other Regions: from March 1st to November 30

These periods are not, however, time and space-bound, given annual seasonal variations. They are given for information only and must be adapted on each site by the service provider, with the contribution of local officials.

In addition, the duration of the contracts resulting from these consultations is two years' renewable. The allocation method is left to the discretion of the authorized managers of the Project Owner ENEO, represented by the Procurement Director or his Representative (Call for Tenders, Restricted Consultations, private agreement, etc.).

The contractor selected for each site must submit appropriate implementation schedules according to the nature and duration of the tasks, and have them validated by the head office SDGP (monthly, quarterly, half-yearly and annual schedules), and by each ENEO site manager (daily, weekly, monthly, quarterly, semi-annual, annual calendars). The submission and validation of the schedules must be done early enough to allow for the availability of the sites to be cleaned, and that the works are done on time.

2.2 Authorization of the service provider and execution officers

Any employee of the service provider must be authorized for each task for which he has one-off or continuous responsibility (HSE ENEO authorization), and the service provider must provide proof of all the authorizations and approvals necessary for the execution of the works (Approvals from the Ministry of the Environment, Insurance, Taxes, Administrations, etc.).

The list and authorizations of the personnel required on each site go hand in hand with the organization of the works, and are indicated by the service provider in the Job Safety Analysis form (JSA, appendix 2-table 2.2), with a view to obtaining the Work Permit (Work Permit, appendix 2 - table 2.3).

2.3 Maintenance and cleaning equipment for green spaces and VRD

The types of equipment applicable to Eneo sites are described in table 1.2 in appendix 1 of this document. However, this list is neither exhaustive nor exclusive. The service provider must be professional and make up for any inadequacies with skills and technical knowledge in the field of maintenance and industrial cleaning of green spaces and VRD, and must propose technical solutions and have them validated by the ENEO site manager or by the SDGP head office, prior to execution.

2.4 Work at height and with high safety risks

Some work at height and/or presenting high risks for the safety of workers on certain sites may require special training and equipment (double sliding ladders, safety harnesses, scaffolding, hoists, cranes, gondolas, etc.). In these cases, the workers performing the task must prove that they have these prerequisites, and have their authorisation validated before each performance. In all cases, a separate Work Permit must be validated by the ENEO site manager (Work Permit, appendix 2 - table 2.3).

2.5 Personal protective equipment

Depending on the site and the nature of the work, individual and/or collective protective equipment may vary. However, it must be convenient and suitable for the tasks to be performed. The applicable list is presented in Table 1.3 of Appendix 1 of this document.

However, this list is neither exhaustive nor exclusive. The service provider will have to make up for the insufficiencies by their technical skills and knowledge, propose and have their technical solutions validated by the ENEO site manager or by the SDGP Head Office.

2.6 Maintenance/cleaning products for green spaces

The products to be used are those commonly available on the market and used in the activity. They must have excellent characteristics in relation to the results sought. They must have excellent washing, degreasing, stain removal, and descaling properties. They must guarantee the protection of equipment against premature ageing and abrasion. They must be used for the equipment and by users of softeners and fresheners. The water used must have chemical properties that are neutral to any attack on metals, utensils and common materials, as well as to any aggression on users.

Without being exhaustive or exclusive, table 1.4 in appendix 1 of this document presents some reference types and brands. Other types or brands may be proposed by the service provider and validated by the site manager and/or the SDGP head office. When they are not specified for standard operations, the products to be used are those commonly used in the activity. In all cases, the service provider must present the list of products and equipment to be used, together with the activity schedules. The technical data sheets will help to assess their characteristics.

2.7 Changes to the volume and/or nature of the work

Any change in the volume of work (increase or decrease) must be re-evaluated on the basis of the lump sum unit prices recorded in the contract. The actual amounts of work are thus adjusted in proportion to the quantities actually executed (Attachment).

Any change in the nature of work must be covered in an amendment, validated by the parties before its execution. The contracting authority reserves the right to reject any request to pay for such work if this condition is not respected. The project owner's validation must be made by the Director of Corporate Services or his deputy.

Additional works not covered by these specifications or by the contract must be included in an amendment which must be validated by mutual agreement between the two parties. A separate order form must be drawn up to cover them (one-off works, special works).

No change in the work execution site can be made within the framework of a contract without a global review by the project owner, recorded in a letter sent to the service provider to indicate his agreement. The project owner's approval must be given by the Director of Corporate Services or his deputy.

In all cases, the quality of the services must not suffer any objection, as the service provider is obliged to offer all his knowledge and skills for their proper performance.

3 OVERVIEW OF THE SERVICE PROVIDER'S RESPONSIBILITIES

The overview of the service provider's responsibilities includes:

- Active workforce on the work site
- Responsibilities for the execution of the work
- Reporting obligations
- Safety at work
- Occupational health
- Additional undertakings of the service provider

3.1 Active workforce on the work site

The service provider shall perform the service and assume his responsibilities in a professional, diligent, efficient and cost effective manner. He shall at all times ensure the administration of the maintenance work on the sites.

At the beginning of each week, the service provider shall submit a list of their personnel working on each site, specifying the teams, the role, the periods and areas of intervention of each individual and each team. This list must be handed in during the site safety meeting held at the beginning of the week.

Each team must include the following personnel:

- The foreman, general site supervisor
- The HSE manager, contractor safety manager
- Operations staff (in pairs for sensitive sites)
- Emergency personnel (high-risk sites).

For sensitive work sites (work at height, proximity to electric cable, proximity to water and electricity generation equipment), special authorisations are required for the intervention personnel. It is also forbidden for a maintenance worker to be on the site without supervision and without a second person for possible emergency assistance.

It is understood that for small sites or small-scale interventions, certain functions may be combined, provided that such combinations do not impinge on the quality or duration of the work.

3.2 Responsibilities for the execution of the work

The service provider shall perform the service and assume his responsibilities in a professional, diligent, efficient and cost effective manner. He shall at all times ensure the administration of the maintenance work on the sites.

The service provider shall approach the ENEO Asset Management Sub-Directorate for clarification of the nature of the work to be performed.

The service provider shall develop task sheets describing the process of execution of each basic maintenance task and hand them to ENEO in a clear and understandable form

3.3 Reporting obligations

The service provider must produce monthly reports on the performance and completion of the maintenance activities and the evaluation of the supervisors. The format of these reports and the evaluation form for the ENEO supervisors are defined by the Sub-Directorate of Asset Management at the head office.

In addition, the service provider must identify and report to ENEO by means of a Quick Event Report (QER, table 2.1, appendix 2) on failures that require emergency maintenance or repair. These reports should also indicate any changes or upgrades required to the building infrastructure.

3.4 Safety at work

The service provider shall perform the service and assume his responsibilities in full compliance with the ENEO requirements in terms of safety at work.

The following actions are mandatory and shall be carried out in a timely manner:

- Perform a Job Safety Analysis on a quarterly basis and have the report validated by the relevant ENEO site manager
- Perform monthly site visits (Work Site Visit, table 2.4, appendix 2) and report back to ENEO.
- Organise daily safety briefings (Toolbox Meeting) before starting work and report back to ENEO (written report).
- Hold weekly safety meetings including all employees involved in the maintenance activities and report to ENEO (written report).
- Report on near misses, incidents and accidents during the execution of the work via a (Quick Event Report, table 2.1, appendix 2).
- Carry out accident investigations, even minor ones, and report them to ENEO (written report).
- Participate, together with all active personnel on each site, in safety forums and alerts organised by ENEO on these sites.

For works in transformer substations and power plants (sites with a high risk of electrocution, serious falls and drowning), service providers must have special authorisations issued by the ENEO's Health, Safety and Environment Department.

3.5 Occupational health

All service provider personnel working on ENEO sites must undergo routine medical examinations every year, and must prove that they are not suffering from any contagious disease or any condition that is contraindicated for the tasks to be performed.

In the event of the occurrence of such cases, the staff member concerned must immediately stop working on ENEO sites and undergo the appropriate medical follow-up. He/she must be replaced immediately, so that work rates and deadlines can be met.

The costs of examinations and medical follow-up are entirely at the expense of the service provider.

3.6 Additional undertakings of the provider

The service provider declares that he is fully aware of the location, the nature and difficulty of the services to be performed, execution easements, conditions relating to climate, hydrography, transport, workforce, supply of materials and various accessories. He declares that he has taken cognizance of all the necessary documents, information and assessments, of all the general costs (taxes, insurance, profit, contingencies and others).

Thus, the provider is responsible for

- The execution of all the services defined in these specifications.

All the details of the execution of the services, it being understood that he will use his professional knowledge to fill in any details that may be omitted from the present specifications and other technical documents.

4 APPENDICES

APPENDIX 1

ADDITIONAL INFORMATION

Table 1.1: Green spaces technical specifications/Frequency of tasks

Figure 1: General cycle of seasons in the Regions of Cameroon

Table 1.2: Common materials for maintenance of green spaces

Table 1.3: Personal and/or Collective Protection Equipment

Table 1.4: Types of green spaces maintenance products

Table 1.5: Breakdown and Quantity of Green Spaces Cleaning Zones

APPENDIX 2

HSE PREVENTION-SAFETY

Table 2.1: Quick Event Report - QER

Table 2.2: Job Safety Analysis - JSA

Table 2.3: Work Permit - WP

Table 2.4: Work Site Visit - WSV

APPENDIX 1

ADDITIONAL INFORMATION

Table 1.1: Green spaces technical specifications/Frequency of tasks

No.	TYPE OF WORK	Unit	Frequency	HSE risk
1	Care of flowers and lawns (watering, cutting, cleaning, pricking, etc.)	passage	2 times/week	Fall, injury
2	Pruning of flower and/or sodding hedges, cleaning of internal alleys	passage	2 times/week	Fall, injury
3	Mowing lawns and flowers, removal of litter for the onsite buffer discharge point	passage	2 times/week	Fall, injury
4	Clearing, weeding around the premises (apartments, offices, quarters, restaurants, warehouses, etc.) – high and wild grass	passage	2 times/week	Fall, injury
5	Clearing, weeding beyond the premises but in exploited area- high and wild grass	passage	1 time/week	Fall, injury
6	Clearing, drying and removal of grass in areas away from facilities and premises	passage	1 time/Quarter	Fall, injury
7	Clearing, drying and removal of grass in penstock areas of hydroelectric dams	passage	1 time/Quarter	Fall, injury, drowning, noise
8	Complete clearing of 2metres beyond the barrier of non-exploited surrounding sites (power plants, substations, dams, barrages, holdings, offices, agencies, CDRH, CRK, warehouses, residences, etc.)	passage	1 time/week	Fall, injury
9	Destruction of wild grass and cleaning with herbicides and/or removal of stumps in certain areas of big sites (embankments, fencing of facilities, forest edges, remote outskirts of apartments and quarters, etc.)	passage	1 time/Quarter	Fall, injury, snake bite, insect bite
10	Clearing of surroundings of operation facilities (power plants, substations, etc.)	passage	1 time/week	Fall, injury, electrocution, drowning,
11	Weeding and cleaning of the yard and earth platforms	passage	1 time/week	Fall, injury,
12	Sweeping and cleaning of platforms and bituminous, concrete, gravel, earth or other pathways	passage	1 time/Week	Fall, injury
13	Raking and removal of cut grass and dead leaves fallen from trees for the internal buffer discharge point	passage	1 time/Week	Fall, injury, intoxication

No.	TYPE OF WORK	Unit	Frequency	HSE risk
14	Removal of household waste (apartments, canteens, quarters, clubs etc.) for the buffer discharge point on site	passage	2 times/Day	Fall, injury, intoxication
15	Evacuation of waste from the internal buffer zone to the public discharge	passage	1 time/Week	Fall, injury, intoxication
16	Cutting down of wild shrubs, pruning of big trees	passage	2 times/Year	Fall, injury,
17	Cleaning of gutters, nozzles, drains and EP discharge conduits, cleaning and unclogging of septic tanks	passage	2 times/Year	Fall, injury, intoxication
18	Inspection, cleaning and unclogging of septic tanks	passage	2 times/Year	Fall, injury, intoxication
19	Removal of algae on the yard, around premises and facilities	passage	1 time/week	Fall, injury,
20	Cleaning of scrap stored on the ground (removal of encrusted herbs, dust removal)	passage	1 time/Quarter	Fall, injury, snake bite
21	Cleaning of fences (encrusted grass, dust, etc.)	passage	1 time/Quarter	Fall, injury,

Figure 1: General cycle of seasons in the Regions of Cameroon

REGIONS / DELEGATIONS	JANV	FEV	MARS	AVR	MAI	JUIN	JUIL	AOUT	SEPT	OCT	NOV	DEC
DRNEA												
EXTREME-NORD												
NORD												
ADAMAOUA												
SIEGE ET AUTRES REGIONS												
Saison sèche												
Canicule												
Petite Saison Pluvieuse												
Grande Saison Pluvieuse												

Table 1.2: Common materials for maintenance of green spaces

No.	DESCRIPTION OF MATERIAL	QUANTITY (to be defined by the service provider)
1	Watering can	
2	Barrel, bucket	
3	Bag-in-barrel	
4	Sprinkler spoiler, sprinkler hose	
5	Air blower	
6	Broom, brush	
7	Disc for mono brush	
8	Wheelbarrow, wagon	
9	Cutter, pruner, sickle	
10	Knife, star-shaped knife	
11	Cutlass, a machete, shovel, hoe	
12	Star sawblade	
13	Roller of mowing wire	
14	Rake, fork, hammer	
15	Axe, pickaxe, dryer	
16	Motorized lawn mower	
17	Motorized brush cutter	
18	Saw, chainsaw, motor saw	
19	Fringe broom, brush broom	
20	Giant broom on rod, industrial broom	
21	Sprayer	
22	Dustbin	
23	Stepladder, ladder, scaffold	
24	Basket, harness	
25	Truck, bike	

Table 1.3: Personal and/or Collective Protection Equipment

N°	DESCRIPTION OF MATERIAL
1	Safety helmet
2	Anti-particles safety goggles
3	Anti-UV safety goggles
4	Earmuffs
5	Anti-dust masks
6	Protective respiratory toucans
7	Respiratory masks
8	Leather handling gloves
9	Plastic gloves for chemical products
10	Professional 2-piece work wear
11	1-piece safety suit
12	Safety jacket
13	01 piece raincoat
14	02 piece raincoat
15	Fluorescent vestment
16	Leather safety boots
17	High plastic safety boots
18	Service ropes or lifeline
19	Stop fall
20	Safety harness
21	High rescue kit
22	High rescue ladder
23	DMT for risky pruning works
24	First aid kit

Table 1.4: Types of green spaces maintenance products

DESCRIPTION OF TASK	TYPE OF PRODUCT	DESIGNATION OF PRODUCTS
Destruction of insect shelters	Insecticide	
Treatment of lawns and flowers	Anti-parasite	
Destruction of wild grass	Weed killer	
Increase in growth of lawn grass	Fertilizer	
Others	To be stated	

Table 1.5: Breakdown and Quantity of Green Spaces Cleaning Zones

ZONE 1 - HEAD OFFICE + DRD

No.	Sites	Usage	Unit	Qty	UP	TP
1	Avenue De Gaulle	Offices	m²	11 035		
2	Apartment GM at Bonanjo	Apartments	m²	716		
3	Concession at Koumassi	Offices	m²	1 533		
4	Apartment DGM at Bali	Apartments	m²	716		
5	Eneo Villas at Bonapriso	Apartments	m²	583		
6	Platform Bali (Bali I & Bali II buildings, Technical Base, SDGP villa and SECURITY villas)	Offices	m²	1 788		
7	Immeuble Rose Koumassi	Offices	m²	3 055		
8	Concession at Bassa	Offices	m²	42 066		
9	Substation at Ngodi Bakoko	Substations	m²	27 972		
10	Substation at Logbaba	Substations	m²	41 702		
11	Substation at Logbaba 1 & 2	Power plants	m²	16 539		
12	Substations at Bassa, Deïdo & Bonaberi	Substations	m²	13 488		
13	Substations at Koumassi & Makepe	Substations	m²	16 361		
14	Agencies DEX Douala-Centre (Bepanda, Deïdo, Bassa)	Agencies	m²	96		
15	Agencies DEX Douala-Est (Billes, Yassa, Dakar, Ndogpassi)	Agencies	m²	0		
16	Agencies DEX Douala-Nord (Logpom, Bonamoussadi, Palmiers)	Agencies	m²	181		
17	Agencies DEX Douala-Nord (Leindi, Pr21)	Agencies	m²	0		
18	Agencies DEX Douala-Ouest (Bonaberi-Nord, Bonaberi-Sud, Centre De Souza)	Agencies	m²	260		
19	Agencies DEX Douala-Sud (New-Bell, Akwa, Koumassi)	Agencies	m²	764		
	Total Zone 1					0

ZONE 2 - DRSANO

No.	Sites	Usage	Unit	Qty	UP	TP
1	Song-Loulou hydroelectric power plant	Power plants	m²	616 080		
2	Edea hydroelectric power plant	Power plants	m²	151 315		
3	Kribi Retreat Centre	Kribi retreat centre	m²	7 002		
4	Mangombe substation	Substations	m²	48 243		
5	Njock-NKong substation	Substations	m²	29 451		
6	Agencies at Eseka, Edea, Boumyebel	Agencies	m²	3 148		
7	7 Agencies in the DRSANO (Niete, Campo, Ngambe, Dizangue- Pouma,	Agencies	m²	4 424		
8	New building in the DRSANO, Kribi	Agencies	m²	800		
9	Campo remote power plant	Power plants	m²	9 684		
	Total Zone 2					0

ZONE 3 - DRSOM

No.	Sites	Usage	Unit	Qty	UP	TP
1	CDRH Ombe	Apartments	m ²	25 000		
2	Regional warehouse at Ombe	Warehouses	m ²	14 654		
3	90kV substation at Nkongsamba	Substations	m ²	7 078		
4	Substation at Bekoko	Substations	m ²	24 772		
5	Substation at Limbe – Mile2	Substations	m ²	5 953		
6	Substation at Mabanda	Substations	m ²	0		
7	Substation at Njombe	Substations	m ²	222		
8	Substation at Sonara	Substations	m ²	7 547		
9	1 Thermal power plant DRSOM (Mundemba,)	Power plants	m ²	5 631		
10	Limbe HFO thermal power plant	Power plants	m ²	46 369		
11	Eneo head office, Mungo at Nkongsamba	Offices	m ²	783		
12	Head office DRSOM in Limbe	Offices	m ²	3 949		
13	4 Residences DRSOM in Limbe (Technical Div at Bota, Living quarter Head of Tech Div, Residence Regional Director, Eneo Flat Bota Gra)	Apartments	m ²	11 341		
14	Villa in Buea	Apartments	m ²	3 634		
15	8 Agencies in Mungo (Loum, Melong, Santchou, Yabassi, Banguem, Manjo, Mbanga, Penja)	Agencies	m ²	506		
16	Kumba warehiuse and 10 Agencies in DRSOM (Kumba, Buea, Mundemba, Muyuka, Ekondo-Titi, Mutenguene, Kembong, Mamfe, Tiko, Tombel,)	Agencies	m ²	35 807		
	Total Zone 3					

ZONE 4 - DRY – DRC – DRSM – DRE

No.	Sites	Usage	Unit	Qty	UP	TP
1	Head Office DRE Bertoua	Offices	m ²	0		
2	Warehouse and DvT Bertoua (Ekombitié)	Warehouses	m ²	10 824		
3	Thermal power plant at Bertoua	Power plants	m ²	15 930		
4	Thermal power plant (Yokadouma, Moloundou, Lomie, Garoua-Boulai, Bétaré-Oya), Lomié solar power plant	Power plants	m ²	16 645		
5	Agencies (Belabo, Yokadouma, Mouloundou, Lomie, Garoua-Boulai, Bétaré-Oya, Dimako, Minta, Batouri, Ndiang, Nguelemedouka)	Agencies	m ²	554		
6	New Agency-LV at Mendong	Agencies	m ²	0		
7	Agencies in Yaounde (Etoudi, Essos, Kondengui, Soa, Nlongkak, Mimboman, Nsam, Biyem-Assi, Nkolbikok, Messassi, Odza, Nkolbisson, Mbankomo)	Agencies	m ²	6 415		
8	Eneo building at Nlongkak	Offices	m ²	3 085		
9	Residences (Bastos-Essos)	Living quarters	m ²	4 593		
10	Head Offices DRY – Centre Agency	Offices	m ²	803		
11	Former agency at Mvog-Mbi	Agencies	m ²	337		
12	Ngousso LV	Agencies	m ²	2 250		
13	Eneo Club at ESSOS	Club	m ²	3 992		
14	Eneo building at Mbankolo	Offices	m ²	0		
15	Regional warehouse in Yaounde	Warehouses	m ²	7 650		
16	Thermal power plant (Mefou, Oyomambang I & II)	Power plants	m ²	11 319		
17	Agency and LV Efoulan	Agencies	m ²	0		
18	Substations (Ngousso, Ahala, Oyomabang)	Substations	m ²	26 542		
19	PTU thermal power plants at Ahala	Power plants	m ²	220		

ZONE 4 (Cont. 1/1) - DRY – DRC – DRSM – DRE

No.	Sites	Usage	Unit	Qty	UP	TP
21	Substations (Kondengui, Nsimalen)	Substations	m²	1 709		
22	Head Office DRTC and BRGM substation	Offices	m²	5 933		
23	Agencies at Makak, Mfou, Ngoumou, Awae, Akonolinga, Ayos	Agencies	m²	1500		
24	Thermal power plant at Yoko	Power plants	m²	0		
25	Agencies de Obala-BT, Bafia, Mbanjock, Nanga-Eboko, Sa'a, Ntui, Yoko, Okola, Ndom, Head office DRC Obala	Agencies	m²	1 978		
26	Agencies de Mbalmayo, Metet, Endom	Agencies	m²	5 000		
27	Substation at Mbalmayo	Substations	m²	22 208		
28	Agencies at Ebolowa, Ebolowa warehouse, LV Ebolowa, Mengueme, Ngoulemakong, Zoetele, Ambam, Meyomessala, Bengbis, Djoum, Lolodorf	Agencies	m²	18 746		
29	Thermal power plant - PTU of Ebolowa and Mbalmayo	Power plants	m²	2 407		
30	Thermal power plant at Ambam, Bengbis, Djoum, Meyomessala, Endom, Olamzé, Mbalmayo Djoum solar power plant	Power plants	m²	28 490		
	Total Zone 4					

ZONE 5 - DRNEA

No.	Sites	Usage	Unit	Qty	UP	TP
1	Thermal power plant (Kousséri-Banyo-Ngaoundéré-Tibati-Touboro-Ngaoundal-Poli-Djamboutou-Tignère)	Power plants	m²	173 015		
2	Maroua warehouse	Warehouses	m²	6 000		
3	Thermal power plant at Kousséri	Power plants	m²	0		
4	Thermal power plant (Poli-Djamboutou)	Power plants	m²	0		
5	Centre (Banyo-Touboro-Tignère-Tibati-Meiganga-Ngaoundal)	Agencies	m²	545		
6	Centre (Mora-Yagoua-Kaele-Kousséri-Moloko-Moulvoudaye)	Agencies	m²	1 500		
7	Centre (Ngong-Rey Bouba-Figuil-Guider-Poli-Tcholié-Mayo Oulo-Lagdo)	Power plants	m²	1 500		
8	Substations (Mora-Youth & Sports-Rural council- Wildlife School-French Consulate-95 De La Savonnerie- National Printing Press-Moulvoudaye)	Substations	m²	0		
9	Substations (Djamboutou- 110/90-110/15-Maroua-Ngaoundéré-90 Guider)	Substations	m²	36 317		
10	Substations (Yagoua-Mokolo)	Substations	m²	8 000		
11	Head offices (Garoua-Maroua-Age Maroua Rural-Ngaoundere)	Offices	m²	15 000		
12	Living quarters and Lagdo power plant	Power plants		493 042		
13	Mbakaou storage dam	Offices	m²	188 290		
	Total Zone 5					

ZONE 6 - DRONO

No.	Sites	Usage	Unit	Qty	UP	TP
1	Agencies (Djemoun-Nylon Baf)	Agencies	m²	284		
2	Wood pool at Bafounda	Industrial site	m²	0		
3	Head office, DRONO Bafoussam	Offices	m²	0		
4	UPPB Bafoussam	Industrial site	m²	10 000		
5	Agencies (Mankon-Nkwen-Santa)	Agencies	m²	455		
6	(Bafut-Bali-Bambili-Batibo-Fundong-Jakiri-Kumbo-Mbengwi-Ndop-Ndu-Nkambe-Wum) centres + Del Bamenda + Kumbo substation	Agencies	m²	33 526		
7	Agency at up station Bamenda	Agencies	m²	43		
8	Thermal power plant at Bafoussam	Power plants	m²	19 220		
9	Regional warehouse, NW, Bamenda	Warehouses	m²	0		
10	Bafoussam substations	Substations	m²	8 236		
11	(Baham-Bamendjou-Bandjoun et base technique-Foumban-Malantouen-Foumbot-Koutaba-Magba) Centres	Agencies	m²	259		
12	Head Office, DRONO Bafoussam	Offices	m²	10		
13	Storage Dam (Bamendjin-Mape)	Industrial site	m²	240 806		
14	(Banganté-Bazou-Ndikinimeki-Nkondjock-Tonga) Centres	Agencies	m²	1 459		
15	Substations (Banganté-Bafang)	Substations	m²	4 369		
16	PTU at Bamenda	Substations	m²	2 600		
17	(Bafou-Dschang-Mbouda-Nkondjock-Case passage bafoussam-Bandja-Kekem) Centres	Agencies	m²	127		
18	CT at Nkondjock	Power plants	m²	6 500		

ZONE 6 (Cont. 1/1) - DRONO

No.	Sites	Usage	Unit	Qty	UP	TP
19	Substation at Bamenda	Substations	m ²	0		
20	Substation at Dschang	Substations	m ²	5 568		
21	Substation at Foumban	Substations	m ²	10		
22	Substation at Mbouda	Substations	m ²	1 831		
23	Substation at Nkambé	Substations	m ²	3 210		
	Total Zone 6					

APPENDIX 2:

HSE PREVENTION-SAFETY FORMS

Table 2.1: Quick Event Report – QER Form

QUICK EVENT REPORT (QER)

It is the duty of any personnel working for ENEO to report any incident experienced or witnessed within, 24 hours using one of the following means:

Il est du devoir de toute personne travaillant pour ENEO de signaler tout événement dont elle est témoin ou victime dans les 24 h en utilisant l'une des 3 possibilités suivantes :

Mail : HSE.reporting@eneo.cm

Fax : (+237) 2 33 42 50 34

Telephone(Bipable) : (+237) 675 29 10 07

N° S/D-SERS :

Name :

Nom:

Contact :

Unit /Team :

Date of event :

Time of event :

Heure:

Location of event :

Lieu de l'évènement :

Event description :

Description de l'évènement :

Table 2.2: Job Safety Analysis - JSA)

Description of task:											
Work environment:						Date :			Unit :		
Prepared by:						Function :					
Reviewed by :						Validated by :					
NOTICE: RISK & EXPOSURE = ACCIDENT											
1. DESCRIPTION N OF WORK PHASES	2. ACTUAL OR POTENTIAL HAZARDS							3. PREVENTIVE OR PROTECTIVE MEASURES			
	2.1. DESCRIPTION	2.2. Type						3.1. DESCRIPTION	3.2. Type		
		ELECTRIC	MECANIC	ENVIRONNEMENT	SAFETY	FALL/	CHEMICAL		CONTAIN	MITIGATE	PERSONAL
Preparation for emergencies							First aid _____ Hotlines: _____ : _____				
In case of change, have we taken into consideration											
Persons		Procedures			Equipment			Environment			
Works supervisor Staff authorization Coordination of work with other teams Communication Fatigue How to direct pedestrians The General Public		Lockout/tagout of the facility Grounding Beacons Grounding of Vehicles Safety instructions Confined space Emergency procedure			Installations Tools and PPE Vehicles Structures Loads to be carried Directional signs Beacons			Other facilities Atmospheric conditions State of the soil State of the lighting Planning			

7. Team members present				
Full names		Employee ID	SIGN	
1				
2				
3				
4				
5				
6				
Works Supervisor:			ENEО Supervisor	
			Direct	
			Indirect	

Instructions

Notice: Risk & Exposure = Accident

1. Work phases

Record the main phases of the task. Focus only on tasks carried out on the worksite. Tasks prior to the worksite are different tasks of which some require a separate JSA.

2. Identification of major risks

Record risks identified for each work phase.

This column is subdivided into two parts (2.1. Description of the risk and 2.2. type of risk)

2.1. Description of risk

In this column it is worthwhile making a brief description of the risk identified.

2.2. Type of risk

The types of risks common in sites are identified in this column. They are:

- Electrical (e. x. electric shock and electric arc)
- Mechanical (e. x. running up against, mobile part of a machine, work posture that can cause an injury)
- Environment (hole at the site, insects or reptiles, chemical product, narrow space)
- Traffic (vehicle in motion)
- Fall (load in suspension, person working overhead)

Each risk identified in sub-column 2a corresponds to a specific type.

Ensure that each type has been taken into account in the identification of risks.

3. Prevention and Protection measures

It is worthwhile recording actions that the team must implement in order to avoid an injury. This column is subdivided into two sub-columns (3.1. Description of measure, 3.2. Type of measure)

3.1. Description of measures

Describe briefly the actions to be taken in order to ensure the safety of persons

3.2. Type of measure

Three types of measures stand out:

- **Curbing the risk** - Measures that ensure that the risk is eliminated or reduced

Examples:

- Installing a fence,
- Separating the workplace from all energy sources
- Securing a rotten pole before climbing

- **Reducing or eliminating exposure**- Measures that reduce or eliminate exposure

Examples:

- Installing DMTCC
- Respecting safety distances (limits of proximity)
- Working with insulating tools

- **Personal Protection** – personal protection equipment for risk identified

Examples

- Face shield
- Insulating gloves
- Safety boot

N.B. personal protection alone is not acceptable as a measure. It is necessary to look for a combination of measures in order to ensure the safety of persons.

Preparation vis-à-vis emergencies

Prior to any intervention each member of the team must know what to do in case of an emergency.

Ex. Who and how to ensure rescue; who to call in case of emergency; first aid kit.

Table 2.3: Work Permit – WP Form

Site				ENEo official of the site	
Date		Time		Visa	
Type of work	<input type="checkbox"/> Non-electric	<input type="checkbox"/> MV-HV work	<input type="checkbox"/> LV response		
Description of work to be carried out:					
Place of response:					
Expected start date of work:			Expected duration of work:		

RISKS RELATED TO ACTIVITIES

Risks	Precautions

EMERGENCY PREPAREDNESS

Tick required responses <input type="checkbox"/> Rescue at height <input type="checkbox"/> Cardio pulmonary Resuscitation <input type="checkbox"/> First aid provider <input type="checkbox"/> Fire response <input type="checkbox"/> Decontamination equipment <input type="checkbox"/> Spillage <input type="checkbox"/> Medical assistance	Expected measures
--	-------------------

RISKS RELATED TO WORKING ENVIRONNEMENT

Risks	Precautions

Company in charge of work:	Name and visa of Work Manager:
Number of persons on the site:	

Approval of site officer		<i>I, the undersigned, hereby accept the operation with the precautions described</i>	
Nam	Date	Visa	
Validity :			
Level of supervision required ▼		Designated overseer	
<input type="checkbox"/> At the beginning of preparation	<input type="checkbox"/> During preparation	<input type="checkbox"/> At the beginning of operations	<input type="checkbox"/> Round the clock

Works that require logout/tagout of energy			
Logout/tagout attestation		Restoration (date and time)	
Name and visa of logout/tagout officer			

Approval of overseer		<i>I, the undersigned, hereby validate that all precautions have been taken</i>	
Name	Date	Visa	

Approval of work supervisor	<i>I, the undersigned, hereby commit to maintaining the precautions during work</i>
------------------------------------	---

Name	Date	Visa
End of work notice	<i>I, the undersigned, declared having withdrawn all personnel and equipment from the places of work</i>	
Nom	Date	Visa

Table 2.4 :

Work site visit report (WSV) form

To be sent to unit leader and to HSE.reporting@eneo.cm / fax 33 42 50 34

eneo Cameroon
S.A.

Release Date

2014-11-05

Travaux Généraux / General Works

Date	Heure Time	Site du chantier Working site	
Type de travaux observés Type of activities			
Equipe observée	<input type="checkbox"/> Entreprise sous-traitante <input type="checkbox"/> Equipe eneo	Nom de l'Entreprise Contractor	
Nom du chef d'équipe Team leader		Superviseur eneo ENEO supervisor	
Noms des équipiers / names of team members			

Compte rendu des observations lors de la visite Log of visit's finding	Yes Oui	No Non	N/A N/V	Observations Comments
1 - Une autorisation de travail à été délivrée par le responsable du site A work permit was delivered by the Site HSE responsible person				
2 - Les électriciens, conducteurs de grue, travailleurs en hauteur sont habilités worker at height are certified / electrician, crane operators,				
3 - Un document décrivant les précautions est disponible (J S A) A document describing safety precaution is available (JSA or equivalent)				
4 - Les risques et les précautions sont pertinents pour la tâche réalisée Risk and controls described are relevant for the task performed				
5 - Les mesures de sécurité décrites dans ce document sont appliquées Safety precaution described in the document are implemented				
6 - Une fiche de briefing HSE a été émarginée par les équipiers A prejob briefing sheet is endorsed by team members				
7 - Avez-vous participé à la séance d'information préalable sur la sécurité au cours de laquelle ont été couverts tous les dangers et les risques inhérents au travail à effectuer Did you participate in the pre-job safety briefing and were all the hazard and risks involved in the job activity addressed ?				
8 - Le personnel est exposé au risque électrique Personnel is exposed to electrical risk				
9 - Une attestation de consignation est établie / Isolation certificate is issued				
10 - Les appareils de levage utilisés ont été inspectés depuis moins d'un an ; inspected for less than one year Lifting equipment used were				
11 - Les levages sont réalisés dans de bonnes conditions de sécurité Lifting operations are performed safely				
12 - Le personnel est informé des risques potentiels des produits manipulés ; hazards related to chemicals Personnel is informed about				
13 - Des précautions sont mise en œuvre pour éviter les déversements de produits dangereux Precautions are implemented to avoid spill of hazardous substances				
14 - Des dispositions sont prévues pour le traitement des déchets Arrangement are made for waste disposal				
15 - Les intervenants sont équipés des équipements de protection individuelle nécessaires / Personal Protective Equipment are worn				
16 - Les échafaudages sont exempts de trous, équipés de garde-corps et de moyens d'accès en sécurité ; scaffold are without gap and fitted with guard rails and safe access				
17 - Les travaux en hauteurs en dehors des plateformes sécurisées sont réalisés avec harnais attaché à un point fixe. Works at height out are performed safely				
18 - Un personnel formé aux premiers soins possède une trousse de secours ; One first aid trained personnel get first aid equipment				
19 - La sécurisation vis-à-vis du trafic routier est assurée / Safety against road traffic is ensured				
20 - Les intervenants se déplacent avec des moyens de locomotion sûrs Team use a safe vehicle for their transportation				
21 - Le conducteur est formé en conduite défensive / Driver has been trained in defensive training				

Recommandation Speciale / Special Recommendation : Est-ce le travail requis pour être arrêté ? Is the job Required to be stopped?	A cause de / Due to:	Yes Oui	No Non
	Déviations par rapport à la procédure / Deviation from the procedure		
	Manque d'EPI-EPC – outil approprié / Lack of adequate PPE-EPC or Equipment - Tools		
	Fatigue cumulée des opérateurs / Cumulative operators fatigue		
	Violation d'une ou plusieurs des 10 règles cardinales de sécurité / Violation of one or more safety cardinal rules		
	Autre décrire / Other Describe :		

Note :
En cas de suspension de travail, coordonné immédiatement avec un responsable d'eneo en charge de la supervision des travaux.
In case of the suspension of the job, immediately coordinate with the ENEO responsible person of the job, his supervisor or immediate chief and the Safety Regional Coordinator as appropriate.

Principale action requise / main action required	Je soussigné m'engage à communiquer à mon responsable les actions requises et la date prévue de réalisation I undersigned commit to inform my boss about required action and expected completion date Team Leader visa / Visa du chef d'équipe		
	Date de réalisation prévue / expected completion date		
Personnes ayant réalisées la visite Persons involved in the visit		Unit Unité	Nb QER issued :

(*) N/A = Non applicable

